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# CONTROL OF APHIDS ON SHADE-GROWN TOBACCO



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ENTOMOLOGY  
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Note: The use of parathion suggested in this leaflet is based upon limited experiments in one area. If substantial evidence shows that for any reason the control measures should be altered, the present suggestions will be changed or revoked.

The scientific name of the green peach aphid is Myzus persicae (Sulz.)

TOBACCO growers in Florida and Georgia had no particular trouble with aphids until 1946. Then green peach aphids attacked in numbers in the area producing



shade-grown tobacco. The next year they were worse. Since then growers have had to apply insecticides intensively to prevent serious losses.

These aphids thrive under the cloth structures that shade the tobacco. They especially damage the thin leaves of cigar-wrapper tobacco. They also spread serious virus diseases affecting tobacco.

Scientists and growers alike find that destroying the insects early saves trouble and expense later. Small quantities of insecticides applied to the plant beds and to the young plants in the field check or destroy the insects on their first appearance. This cuts down the danger of widespread outbreaks of insects and diseases in maturing tobacco.

If green peach aphids are attacking your shade-grown tobacco, you may profit by using the following methods which experiments and experience have found most effective in controlling the pests.

### Remove Weeds and Construct Shades Before You Transplant

Destroy weeds in and near the tobacco fields early in the spring, before you transplant. The weeds are likely to harbor aphids.

Completely enclose the tops and sides of the fields with open-mesh cheesecloth before you transplant. The cheesecloth keeps out most of the winged aphids.

### Dust Plant Beds

Because there are usually not many aphids in plant beds, you may have trouble finding them. However, if you carry them to the field on tobacco seedlings, they can start serious outbreaks. It is best to use an insecticide in the plant beds as a precaution.

During the latter part of the plant-bed season, apply a ready-mixed 1-percent parathion dust at the rate of 30 pounds per acre about once a week until transplanting is done.

### Dust Small Plants

Apply 1-percent parathion dust to young tobacco plants after they are transplanted. Hand rotary dusters or traction two-row dusters drawn by mules have been found efficient. Dust weekly during the first 6 weeks of the growing period. Besides killing aphids, parathion checks infestations of grasshoppers and hornworms. If you plan to use another insecticide dust to control tobacco budworm, cutworms, and grasshoppers, simply have parathion added to the dust.

From 7 to 8 pounds of parathion dust per acre will control light, spotted infestations of aphids. If infested transplants remain unprotected by insecticides in the fields for 2 or 3 weeks,

you may have so many aphids that 10 to 15 pounds of dust per acre will be needed to kill the pests.

### Dust or Spray Large Plants

The larger the plants the more difficult they are to dust efficiently with hand dusters and other ground machines. Aircraft can best treat shade-grown tobacco during the latter part of the growing season. You probably apply insecticides during this period to control tobacco budworms and hornworms anyway. By having parathion added to these insecticides, you should control any aphids that escaped earlier treatment or that managed to fly in after early dustings.

If you are dusting from the air, use a dust containing 1 percent of parathion. If you are spraying with aircraft, use 1 pound of 25-percent wettable powder or 1 quart of 25-percent emulsion concentrate per acre in sufficient water to suit the equipment.

Search often for aphids in maturing fields of shade-grown tobacco. If you find small outbreaks, a hand duster filled with 1-percent parathion dust will give your most economical spot treatment.

### Does Parathion Harm Tobacco?

The effect of parathion on the quality of the cured tobacco is still under investigation. So far all available evidence indicates that when applied to the growing plants this insecticide has no detrimental effect on the flavor, aroma,

odor, or burning quality of the cured shade-grown tobacco, which is ordinarily used for cigar wrappers.

Insecticide residues on tobacco are objectionable, however, because of the health hazard to the smoker and because they may mar the appearance of the tobacco and decrease its salability. Therefore, be very careful not to put more insecticide on the growing tobacco than you need to kill the insects.

### Is Parathion Hazardous to Handle?

Parathion is poisonous to man and animals, but with care it may be handled safely at the strengths suggested for aphid control. During the 4-year period 1948-51 large quantities of parathion were used on the shade-grown tobacco crop in Florida and Georgia to control aphids. Users reported only a few minor illnesses that could be attributed to contact with parathion, but no serious injury to man or animals. This record shows that the application of parathion, with the methods and concentrations used, is not unduly hazardous. But it also shows how necessary it is to use all ordinary precautions, especially in handling concentrated parathion in quantity.

### PRECAUTIONS

Parathion is an extremely dangerous poison if swallowed, inhaled, or absorbed through the skin. It should be used only by trained operators who will assume full responsibility and enforce proper precautions as prescribed by the manufacturers.



In handling or applying it, wear goggles and a respirator equipped with a canister specified for protection against organic vapors and dusts. Replace the canister with a new one after use.

A respirator may not protect you when applying parathion in shade-tobacco fields or when handling this insecticide in closed or poorly ventilated spaces. Under these conditions wear a full-face gas mask equipped with a suitable canister.

Wear protective clothing and gloves. Keep your shirt buttoned at the neck, and sleeves rolled down. Wash off without delay any insecticide, especially concentrated parathion, that is spilled on the skin. After every handling, bathe thoroughly with soap and water and wash your clothing.

Keep parathion in closed containers prominently labeled **POISON**. Put it where it cannot be mistaken for food, feed, or medicine, and away from children and farm animals. Wash all utensils and tools thoroughly immediately after use.

If a person using parathion develops headache, nausea, impaired vision, or tightness of the chest, get him to fresh air at once. Give an emetic such as mustard or warm soapy water immediately, and call a doctor. Atropine sulfate is an antidote for parathion. Obtain it by prescription in 1/100-grain tablets. For severe poisoning give two tablets at once and get medical help.

